

## **REMARKS**

Claims 1, 4-6, 8-10 and 15 are now pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

## **CLAIM OBJECTIONS**

Claim 10 stands objected to for an informality. By this amendment, the limitation "said a detection step" is replaced with "said detection step". Favorable consideration of this amendment is respectfully requested.

## **REJECTION UNDER 35 U.S.C. § 103**

Claims 1, 4 and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takizawa et al. (U.S. Pat. No. 6,357,849) in view of Yoshiyama et al. (U.S. Pat. Pub. No. 2002/0140750). This rejection is respectfully traversed.

Although Applicant does not necessarily agree, claims 1 and 10 are amended. The amendments to claims 1 and 10 are based on FIG. 7 and the corresponding descriptions in the specification. No new matter is added.

The device manufacturing apparatus according to the currently amended claim 1 includes a feature of "said controller performs calibration of said receiver before execution of a nozzle detection operation, said calibration including resetting of a gain data at present of said receiver".

In addition, a device manufacturing method according to the currently amended claim 10 also includes a feature of "calibration of said receiver is performed before

execution of a nozzle detection operation, said calibration including resetting of a gain data at present of said receiver".

As explained in the above, the claimed invention according to each independent claim includes the feature that *the calibration includes resetting of a gain data at present of said receiver*. With this feature, the claimed invention enables calibrating the receiver before execution of the nozzle detection operation, while considering the influences on the sensitivity or the like of the receiver, by noise of various equipment (noise generating sources) present in the surroundings of the receiver, or the temperature (heat) of the receiver itself. That is, the claimed invention enables performing the calibration of the receiver considering **the current condition** of the receiver and **the current influences** of the circumstances on the receiver.

On the other hand, Yoshiyama et al. clearly discloses in the ABSTRACT that "An actual detecting position P1 is found based on the level of reflected light. The difference between the theoretical detecting position P2 and the actual detecting position P1 is calculated and *is stored as the calibration value  $\alpha$  in a first calibration data memory M1*. Accordingly, the actual detecting position P1 is set as  $P2 \pm \alpha$ . *The calibration value  $\alpha$  is used in a calibration process to calibrate the detecting position*, so that the level of reflected light can be detected with accuracy". Since the calibration process of Yoshiyama et al. uses the calibration value  $\alpha$  which was obtained in advance to performing the calibration process (that is, prior to running the image forming device), the calibration value  $\alpha$  cannot consider **the current condition** of the sensor (receiver) and **the current influences** of the circumstances on the sensor (receiver). That is, the device and the method disclosed in Yoshiyama et al. cannot perform a calibration of the

sensor (receive) considering ***the current condition*** of the sensor (receive) and ***the current influences*** of the circumstances on the sensor (receive).

As has been explained in the above, the claimed invention according to the currently amended independent claims 1 and 10 includes the above-mentioned feature which is neither disclosed nor suggested in the prior art of record. Accordingly, Applicant respectfully submits that the currently amended independent claims 1, 10, and 15 should be allowable. Likewise, depend claims 4 and 9 should also be allowable.

Claims 5 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takizawa et al. (U.S. Pat. No. 6,357,849) in view of Yoshiyama et al. (U.S. Pat. Pub. No. 2002/0140750) and further in view of Bruch et al. (U.S. Pat. No. 6,814,422). This rejection is respectfully traversed.

Claims 5 and 8 directly or indirectly depend from claim 1. Claims 5 and 8 should be allowable for at least the same reasons as set forth above with respect to claim 1.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Takizawa et al. (U.S. Pat. No. 6,357,849) in view of Yoshiyama et al. (U.S. Pat. Pub. No. 2002/0140750) and further in view of Hah (U.S. Pat. No. 6,371,590). This rejection is respectfully traversed.

Claim 6 depends from claim 1. Claim 6 should be allowable for at least the same reasons as set forth above with respect to claim 1.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Takizawa et al. (U.S. Pat. No. 6,357,849) in view of Yoshiyama et al. (U.S. Pat. Pub. No. 2002/0140750) and further in view of Cleary (U.S. Pat. Pub. No. 2002/0149660). This rejection is respectfully traversed.

A device manufacturing method according to the currently amended claim 15 also includes a feature of "calibration of said receiver is performed before execution of a nozzle detection operation, said calibration including resetting of a gain data at present of said receiver.

The amendments to claim 15 are based on FIG. 7 and the corresponding descriptions in the specification. No new matter is added.

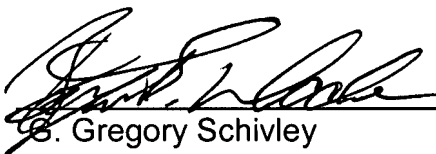
As has been explained in the above with respect to claims 1 and 10, the claimed invention according to the currently amended independent claim 15 includes the above-mentioned feature which is neither disclosed nor suggested in the prior art of record. Accordingly, Applicant respectfully submits that the currently amended independent claim 15 should be allowable.

#### **CONCLUSION**

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: Aug. 17, 2007

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